

10—14 gerade, glatte scharfspitzige Dornen. Ohne die Dornen sind diese Nadeln 0,007—0,014 mm lang und 0,001—0,003 mm dick; samt den Dornen 0,021 mm breit. Die einzelnen Dornen derselben erreichen eine Länge von 0,0074—0,014 mm und eine Dicke von 0,001—0,0017 mm. Es kommen auch Microscleren mit 4—6 konischen, glatten spitzigen 0,017 mm langen und proximal 0,0017 mm dicken Dornen (»Plesiaster« n. Sollas) vor, deren Achsenstück 0,0024 mm dick ist.

Als zufällige »Gäste« im Körper unsres Schwammes kann ich die rundlichen »gelben Zellen« oder Zooxanthellen (0,0052—0,014 mm Durchmesser) erwähnen, welche hier und da in den Kanälen vorkommen. Ebenso sind zahlreiche kugelige oder cylindrisch-stäbchenförmige Organismen (Bakterien?) gruppenweise in meinen mikroskopischen Schnittpräparaten von diesem Schwamm regelmäßig zu finden.

4. Preliminary Report on the Pycnogonida of the German Southpolar Expedition 1901—1903.

By T. V. Hodgson F.L.S.

eingeg. 4. August 1914.

It is with profound regret that I have been so long in working out the Collection of the Pycnogonida made by the German Antarctic Expedition (Gauss) in 1901—1903. I hope that the final drawings and memoranda will be completed in the course of a few weeks at the outside but in order to secure the priority of description in certain species I desire to publish the following preliminary report. The collection is a fairly rich one and while it shows certain strong relations to those of other expeditions it is on the other hand quite distinctive. It contains four new genera and twenty new species as follow.

Colossendeis glacialis.

Colossendeis glacialis Hodgson. Pycnogonida. Discovery 1907.

A single specimen of this species was taken in the Gauss Winter Quarters.

Notoendeis.

This new genus is established to mark the difference between the large and well known *Colossendeis* and closely allied species.

Body perfectly segmented, with short and distinctly separated lateral processes and with well developed eyes.

Proboscis: very large.

Palps: nine jointed.

Oviger: ten jointed, with a terminal claw.

Notoendeis germanica.

The Proboscis is as long as the body and the terminal joints of the palps are as 8, 5, 5, 4, 5.

The body is robust and smooth.

Pipetta australis.

The genus was established by Dr. Loman for a tropical species and now includes an antarctic species taken near the Gauss Winter Quarters in 2450 m.

The specific characters of this antarctic species are ocular tubercle long, conical and without eyes.

Tarsus very short, not one fifth the length of the propodus.

Pentanympion antarcticum.

Pentanympion antarcticum Hodgson. Ann. and Mag. N. H. (7). vol. 14. 1904.

This species has been recorded by every Antarctic expedition and has a circumpolar distribution.

Nymphon unguiculatum.

Body slender with rather long but widely separated lateral processes. Quite smooth. Ocular tubercle short and stout, rounded above the eyes.

The joints of the palps vary but little, 4—5—4, 5—5.

The legs are clothed sparingly with short spinous setae. The terminal claw is long and there are no auxiliaries.

Nymphon tenuimanum.

Body not so much as slender, the lateral processes are widely separated. The ocular tubercle is reduced to a trace and there are no eyes. The legs are provided with extraordinarily long setae on the first tibiae, and to a less extent on the second and the femora. No auxiliary claws.

Nymphon exiguum.

Body comparatively stout with widely separated lateral processes, ocular tubercle placed well forwards and small, eyes well developed in some specimens.

The joints of the palps are as 3—5—1, 2—4.

Propodus twice as long as tarsus. No auxiliary claws; a small species.

Nymphon fuscum.

Nymphon fuscum Hoek. Challenger.

Several specimens occur in the collection from Kerguelen Island. This and its allies *N. antarcticum* of Miers and *N. meridionalis* of Hoek are very perplexing species. In *N. fuscum* the range of variation is

great, the ocular tubercle differ in most of the specimens; the length of the tarsus and propodus is variable, even in the same individual, but the differences are not very great and the relations between the two joints approximately preserved. The setose character of the limbs is accentuated in some specimens. On the whole *N. antarcticum* Miers, only differs in that the tarsus is distinctly longer than the propodus. In *N. meridionale* I find it even more difficult to decide.

Chaetonymphon villosum.

Chaetonymphon villosum Hodgson. Discovery.

This is a stoutly built species, with the lateral processes close together and long coarse setae distributed over the body and especially on the tibia. The three terminal joints of the palps 6—2—3.

Specialized spines on the ovigers are few in number and have 5—7 teeth. The auxiliary claws are small but distinct, the propodus is longer than the tarsus.

31. XII. 1902. 385 m. One specimen.

Chaetonymphon polare.

Another stoutly built species with lateral processes distinctly separated and fringed with spines. Spinous setae fringing each segment.

Palps, three terminal joints as 6—2,75—35.

Oviger specialized spines few, each with 5 or 6 lateral teeth.

Legs armed with spines arising from dermal papillae.

Propodus shorter than tarsus, auxiliary claws small.

7.—8. II. 1903. 350 m.

Chaetonymphon longisetosum.

Body with narrowly separated lateral processes, imperfect segmentation and long setae.

Palp, three terminal joints 5—1,8—2,75.

Very long setae on the principal joints of the leg, a very definite specific character.

14.—16. VI. 1902. 385 m.

Chaetonymphon typhlops.

Body stout and entirely clothed with fine as well as coarse setae, the latter are arranged in a linear manner on the limbs, for the most part on raised papillae. There are no eyes but the ocular tubercle exists as a short cone. This species belongs to the group in which the tarsus is longer than the propodus.

Auxiliary claws are absent. A few specimens were taken.

1. III. 1903. 2450 m.

Austropallene.

A genus established to include those forms which Möbius, Prof. Bouvier and the present writer have included in different genera. The presence of cephalic spurs is a most noticeable feature and is confined to all these southern species.

Body robust or slender, segmentation distinct, lateral processes close together or widely separated. Large and stout cephalic spurs. Eyes well developed. Proboscis tapering, with or without a setose wreath. Cheliferi stout, chelae short and powerful. Palps no trace. Ovigera 10-jointed, without a terminal claw. In the male a distal swelling on the 5th joint.

No auxiliary claws.

Austropallene cornigera.

Pseudopallene cornigera Möbius. Pycnogonida of the Valdivia Expedition.

This species I now consider to be identical with my *Pseudopallene australe*.

The Gauss found several specimens in their Winter Quarters.

Austropallene cristata.

Pseudopallene cristata Bouvier. Pourquoi-Pas.

This species is readily distinguished from all others even at a very early age by the extraordinary development of papillae on the legs each bearing a spinous seta.

Several specimens at Winter Quarters. Various dates.

Austropallene spicata.

A readily distinguishable species, comparatively slender, with widely separated lateral processes bearing spurs distally and having a similar pair but much larger ones on the first coxae, the second coxae are extremely long. *A. brachyura* Bouvier is closely allied but stouter, lateral processes closer together and the neck is shorter.

Several specimens Winter Quarters. Various dates.

Phoxichilidium australe.

The presence of a small process or spur on either side of the proboscis serves to distinguish this species.

A few specimens from Winter Quarters.

Pallenopsis pilosa.

Phoxichilidium pilosum Hoek. Challenger Report.

This species, first described by Dr. Hoek, has since been found at various points in the Antarctic Regions by most of the recent Expeditions.

Winter Quarters. 20. III. 1902 and 5. II. 1903.

Pallenopsis vanhoeffeni.

This species is conspicuously setose but readily distinguishable from the foregoing by the coarseness of the setae. The cephalic segment is longer than the two following. The abdomen is shorter than the first segment and clavate, with a group of long setae. Three specimens.

Winter Quarters. 3. IV. 1902, 7. II. 1903.

Pallenopsis setigera.

Another conspicuously setose species. Body stout, segmentation indistinct, spines on lateral processes, limbs coarsely setose, with a series of stout spines on the propodus; terminal claw powerful with strong auxiliaries. Ovipositor club-shaped.

Three specimens. Winter Quarters.

Pallenopsis spicata.

Not conspicuously setose. Body slender, scarcely so much as widely separated lateral processes. Three doubly pointed tubercles in the mid-dorsal line, tubercles also occur on the lateral processes and the first coxae. Ovipositor club-shaped. With regard to the ovipositors these last two species are peculiar.

Winter Quarters. 5. XII. 1902.

Pallenopsis gaussiana.

This may fairly be called a conspicuously setose species and the distinctive feature is the presence of a spine near the antero-lateral margin of the cephalon. Spines also occur on the lateral processes. The abdomen is longer than the first segment. The legs are clothed with long coarse setae but these vary greatly in length.

Winter Quarters. 7. IV. 1902. 385 m.

Pallenopsis meridionalis.

Body with widely separated lateral processes which, with the first coxae, bear small spines. Segmentation fairly distinct. Long coarse and curved setae are scattered along the legs, chiefly dorsal.

Winter Quarters. 7. IV. 1902. 385 m.

Annothea.

This genus now has a different character to that formerly obtained. Dr. J. C. C. Loman has called attention to the type specimen of Leach now preserved in the British Museum *A. carolinensis*. This species becomes the type of the genus and if bodily form means anything those diminutive species with a discoid body must be transferred elsewhere. *Annothea* is now that which in my "Discovery" Report I described as *Leionymphon* with subsequent additions.

*Ammothea glacialis.**Ammothea glacialis* Hodgson. Discovery.

A single adult female was taken 26. VII. 1902. 385 m.

Ammothea meridionalis.

Body short with lateral processes close together and lightly tuberculated. Transverse ridges produced in the mid dorsal line into conspicuous points. Entire body clothed with numerous short stiff setae, the largest, those on the limbs are arranged linearly; the setae of the dorsal rows are large on the three principal joints. Terminal claw long and the auxiliaries more than half the size.

Winter Quarters. 28. XI. 1902. 385 m.

Achelia.

This genus has been restored from oblivion to include those forms with a discoid body, a more or less imperfect segmentation and with short and stout legs, hitherto included in *Ammothea*.

Achelia megacephala.

Body discoid, smooth. Abdomen very long and cephalon broad. Ocular tubercle stout erect with well developed eyes.

Winter Quarters.

Austrothea.

A new genus designed for those *Ammotheid* species whose body is not discoid in any sense of the term and is without the transverse ridges so characteristic of *Ammothea* in its new signification, also the comparatively long legs is a further character of importance.

Austrothea spicata.

Body stout, divergent lateral processes, the proboscis ovate, slender, and the abdomen nearly as long. Ocular tubercle tall, terminating in a long spike.

8. II. 1903. 350 m. A single specimen only.

Austrothea germanica.

Insignificant spurs on the lateral processes and more conspicuous ones on the first coxae. Ocular tubercle elongate, pointed and directed forwards.

16. VI. 1902. 385 m. A single specimen only.

*Austrodecus glaciale.**Austrodecus glaciale* Hodgson. Discovery.

A large number of specimens of this species were taken throughout the stay of the Gauss in Winter Quarters.

Austroraptus polaris.

Austroraptus polaris Hodgson. Discovery.

Described from two specimens from the Ross Sea it now turns up off Kaiser Wilhelms II. Land.

10. II. 1902. 385 m.

Tanystylum stylicherum.

Nymphon stylicherum Miers. Ann. and Mag. N. H. (4). XVI. 1875.

Tanystylum stylicherum Miers.

A number from Kerguelen Island.

Rhynchothorax australis.

Rhynchothorax australis Hodgson. Discovery.

Described by me from a single specimen taken by the Discovery in McMurdo Sound. A very large number were taken by the Gauss throughout their stay in their Winter Quarters. These reveal the fact that the close approximation of the origin of the lateral processes is simply a sexual matter, in the males they are almost, if not quite, widely separated. From the number obtained it is not a little surprising that none of them carry any eggs or young.

Pycnogonum gaini.

Pycnogonum gaini Bouvier. Pourquoi-Pas.

Of this fine species three adult specimens occur in the Gauss collection together with a number of post-larval forms taken at various dates in Winter Quarters.

Its specific character is the existence of 4 mid-dorsal tubercles, three of them the exaggerated apices of as many transverse ridges; and tubercles on the lateral processes.

Besides the foregoing antarctic species the two following were obtained by the Gauss in temperate or tropical climes.

Tanystylum paulovenssis.

Body discoid, smooth; Proboscis very stout tapering, and nearly as long as body.

Cheliferi reduced to two minute spinose stumps.

St. Paul Island. 2 specimens.

Anoplodactylus maritimus.

Lateral processes scarcely so much as widely separated, abdomen short and directed upwards. Ocular tubercle truncate, eyes well developed. Leg, Femur the longest joint, the second tibia a little shorter and the first still shorter; differences small.

Sargasso Sea. A few specimens.

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5. Ulteriore contributo alla conoscenza del Plancton della Laguna veneta.

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(Con due tabelle.)

eingeg. 5. August 1914.

Lo scopo di questa nota è solo di esporre i risultati dell' esame di sei pescate planctoniche fatte nel porto di Venezia a S. Nicolò di Lido dal Prof. D. Carazzi e dal Dott. G. Teodoro nel marzo 1913.

La rete usata era il N. 20 di Apstein con le modificazioni approntatevi dal Prof. Carazzi (1).

Nelle Tabelle annesse, le pescate sono indicate con i numeri progressivi dal I al VI: ad esse si riferiscono le seguenti indicazioni:

- I^a pescata h. 10 fra le due dighe a porto S. Nicolò.
 II^a - - 11,30 - - - - -
 III^a - - 12,45 - - - - -
 IV^a - - 12 a metà canale fra le due dighe.
 V^a - - 10,45 allo sbocco in mare del Canale di S. Nicolò, vicino al fanale.
 VI^a - - 11 a due kilom. e mezzo fuori delle dighe.

Nelle presenti tabelle sono aggiunte, a quelle delle pescate, due colonne:

Nella prima segno le specie già elencate nei lavori sulla Laguna del Prof. Carazzi e Dott. Grandori (2) ed in quello di Comello e Dott. Teodoro (3), specie ora da me ritrovate. Nella seconda mi riferisco ai lavori sull' Adriatico dello Schröder (7) e del Laakman.

Lo Schröder nell' «Adriatisches Phytoplankton» (7) contempla i *Ceratium*, *Dinophysis* e *Peridinium*, che io invece ho creduto riferire al Zooplankton, quindi anche nella seconda tabella compare il suo nome.

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